St. Clair River
BINATIONAL PUBLIC ADVISORY COUNCIL
E-Newsletter

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We love to receive your feedback and comments, drop us a line if you have a story suggestion or comments.

Kelly Johnson, St. Clair RAP Coordinator

Ken Hall, FOSCR Webmaster

Help FOSCR delist the St. Clair River

Friends of the St. Clair River is a registered Canadian charitable organization. Your financial support for our programs will help FOSCR progress towards delisting the St. Clair River as an Area of Concern in the Great Lakes.

Contributions can be sent to:

Mr. Terry Burrell
Friends of the St Clair River
514 Christina Street North
Sarnia, ON N7T 5W4

All donations will receive a tax receipt.

Call Terry at 519-336-5545 for more information,

***PLEASE* join us.**

Governments Designate St. Clair River Beneficial Use Impairments As "Not Impaired"

The status of two Beneficial Use Impairments (BUI's) in the St. Clair River Area of Concern has been re-designated by Canadian government authorities as no longer impaired. A comprehensive review of two reports was conducted by Environment and Climate Change Canada and the Ontario Ministry of Environment, Conservation and Parks leading to the re-designating decision and public announcement on October 31, 2018.

The two BUI's *Beach Closings* and *Restrictions on Dredging Activities* were designated as "not impaired" for the Canadian portion of the SI. Clair River Area of Concern, pursuant to the provisions of the Great Lakes Water Quality Agreement, 2012.

"Congratulations to all members of the Canadian Remedial Action Plan Implementation Committee and local community members who have worked so diligently to attain these important environmental milestones," said Michael Goffin, regional director general with Environment Canada in a letter dated October 31, 2018.

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River Rap Program Expansion Announcement

The tried & tested 'River Rap' program sponsored by FOSCR & delivered in partnership by St. Clair Region Conservation Authority (SCRCA) is currently undergoing an expansion. Research & development has begun to bring the program to a wider Secondary School audience. The goal is to add new curriculum links to expand the programs reach & engage students in a wider educational scope. Following a 'place-based' education model, SCRCA staff aim to include more content in the History, Geography & First Nations perspective of the St. Clair River & the surrounding watersheds.

Secondary Students at SCRCA's May 2017 Student Conference held at Mooretown Centennial Park; SCRCA hopes to engage more secondary level students with the expansion of the River Rap program.

An important addition to the program will be sharing Lambton County's 'story' from it's modern beginnings with the 'Great Enniskillen Swamp', the logging & subsequent draining of the landscape, which led to settlement & present day agricultural & urban communities.

By reaching out to local First Nation partners to include FN experiences & historical accounts of the changes witnessed over the past 150 years, SCRCA hopes to broaden the student's perspectives & understanding of this great river. Geographically the local landscape has changed significantly over the past 150 years & understanding these changes strengthens the student's ability to think critically about the future of the St. Clair River.

Expansion of the program is currently under development & SCRCA education staff hopes to have the program ready for January 2019.

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New Report Shows Great Lakes Restoration Efforts Boosting Regional Economic Activity

Despite strong anecdotal evidence that the Great Lakes Restoration Initiative (GLRI) helped turn the economy around in many Great Lakes communities, until recently there was no comprehensive study of the overall impact of the program on the regional economy. A new report released recently shows that every federal dollar spent on Great Lakes Restoration Initiative (GLRI) projects from the program's launch in 2010 through 2016 will produce an additional $3.35 of additional economic activity in the Great Lakes region through 2036. Read more about the GLRI and the study here.

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Ontario Trillium Foundation Grant Supports FOSCR & SCRCA Partnership

Background:
The St. Clair River flows 64 km from Lake Huron to Lake St. Clair. The St. Clair River Area of Concern (AOC) covers 3350 km2 (335 000 ha) and includes the river, its delta, channels and its immediate drainage basin. The AOC was designated under the Great Lakes Water Quality Agreement (Canada & US). The wetlands and shallow open waters of the lower St. Clair River and Lake St. Clair provide important habitat for many species and are considered some of the most important wetland areas in the Great Lakes basin.

The project focuses on one of the Beneficial Use Impairments (BUI's), "Loss of Fish and Wildlife Habitat", which requires wetland habitat creation, improved wetland quality, enhanced fish habitat, and tributary buffer creation to remove this BUI. Ontario Trillium Foundation (OTF) Funding:

An application was submitted by the Friends of the St. Clair River (in partnership with SCRCA) in November of 2015 for a 3-year Grow Stream Grant for $160,300. Funding was approved for the full amount. The Grow Grant aligned with the following OTF goals:

- **Action Area:** Green People
- **Priority Outcome:** More ecosystems are protected and restored
- **Grant Result:** Conservation and restoration efforts are better planned and more sustainable

This collaborative project consists of three major components.
1. St. Clair River AOC Aquatic Inventory – The St. Clair River Watershed Plan states that mussel and fish data is lacking for the tributaries in the AOC. Current mussel, fish, invertebrate, and water quality data is essential to prioritizing aquatic restoration efforts mandated to de-list the area.

2. St. Clair River AOC Aquatic Habitat Restoration – Although much of the St. Clair River AOC requires further inventory studies to assist in restoration decisions, some projects were ready to proceed. Aquatic habitat restoration is a key component of the AOC recovery and de-listing efforts. Aquatic habitat restoration project examples include wetland creation/restoration, fish barrier removal, natural riffle/pool construction in streams, and tributary buffer creation.

3. St. Clair River AOC Aquatic Outreach and Education – Improved engagement of local residents through education and outreach on the topic of the loss of fish and wildlife habitat. Education will be provided to school children through hands-on opportunities to experience and learn about the wildlife in the region. The project will help us better understand the AOC aquatic health and communicate the progress made towards de-listing the St. Clair River AOC.

Lake Chubsucker

Grass Pickerel

Progress:
1. Aquatic Inventories:
Fish: Thirty-nine fish surveys have been completed throughout the AOC (15 in 2016/17, 10 in 2017/18, and 14 in 2018/19). A total of 57 species have been observed with over 20,000 fish captured and identified. Five species at risk have been observed at sixteen sites. At risk fish include Blackstripe Topminnow (Special Concern), Silver Lamprey (Special Concern), Spotted Sucker (Special Concern), Grass Pickerel (Special Concern), and Lake Chubsucker (Threatened).

Mussels: The 2016 mussel work consisted of large mussel relocation on Bear Creek as part of a barrier removal project. The project was successful as over 600 mussels were surveyed and over 300 relocated including 69 Mapleleaf (Threatened). A Fawnsfoot (Endangered) mussel was discovered, which is a new species record for the North Branch of

the Sydenham River. Additional species surveyed include White Heelsplitter, Pink Heelsplitter, Giant Floater, Fragile Papershell, Deertoe, Flutedshell, Spike, and Threeridge.

View from Bickford Line as the mussel relocation took place

Fawnsfoot Mussel

Mapleleaf

In 2017, fourteen intensive timed searches were completed on a 7km stretch of Black Creek. 1296 live mussels were surveyed, as well as 1369 dead mussels. In total 11 species were observed including 529 Mapleleaf (Threatened) and 1 Lilliput (Threatened - COSEWIC). The Lilliput is the only current (in the last 25 yrs.) record for the North Sydenham. A 1-year follow up survey was completed as part of the previous year's mussel relocation. An additional 294 mussels were surveyed.

In 2018, 20 intensive timed searches were completed, 16 on Bear Creek and 4 on Black Creek. 2168 live mussels were surveyed, as well as 4219 dead mussels. In total 16 species were observed including 1027 Mapleleaf (Threatened), 1 Lilliput (Threatened - COSEWIC), and 8 Threehorn Wartyback (Threatened – COSEWIC). Two new species records for the North
Sydenham were observed in 2018, including the Threehorn Wartyback and the Pimpleback. A 2-year follow up survey was completed as part of the 2016 Bear Creek mussel relocation. An additional 217 live mussels were surveyed.

Threehorn Wartyback

Pimpleback

Temperature Monitoring: Seven watercourses have been monitored for temperature in the AOC. After data analysis, watercourses will be categorized as either warm, cool, or cold water. In 2016, 3 sites had temperature loggers deployed and all 3 were classified as cool water. In 2017, 2 sites were completed with both classified as warm water. In 2018, 2 additional sites were monitored; both will be categorized as cool water.

2. Habitat Restoration:
Through the first two years, OTF funds have contributed to 10 restoration projects in the AOC. One project was a barrier removal and riffle habitat creation, seven have been wetland creation, and two were riparian buffer plantings. A total of 23.1 acres of habitat have been improved or created and one in-stream barrier to fish passage has been removed. In 2018, 2 wetland restoration projects were funded, and one wetland maintenance project will be completed.

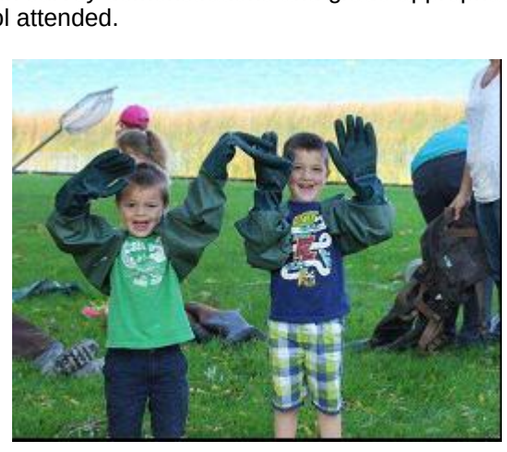
Barrier Removal and Riffle Creation

Before After

Wetland Creation with Control Structure

Before After

3. Outreach and Education:
In 2016, SCRCA education and biology departments joined a local AOC elementary school in a River Day Celebration along the St. Clair River. Students participated in Fish survey demonstrations and grade appropriate curriculum connected games and activities. All students (160) of the school attended.



Students getting familiar with equipment

In 2017, OTF funds were used to develop and implement the biological component of the Great Lakes Student Conference held in Mooretown. SCRCA staff gave students hands-on opportunities to handle and process live fish. Students also went through a mussel survey station where they could sift through sediment, find mussel shells, and learn how to identify them. The conference was an effort to increase Great Lakes literacy and had participation from the Lambton Kent District School Board (LKDSB). Over 70 students from four LKDSB high schools attended the conference and had the opportunity to learn about issues surrounding the Great Lakes, possible career paths, and explore cultural connections.

In the fall of 2018, SCRCA ran the "River Day" program at an elementary school located close to the St. Clair River. The focus was on fish, mussels, benthics, water & pollution, wetlands, and invasive species. All students from the school attended the event.

Staff guiding students through a mussel search

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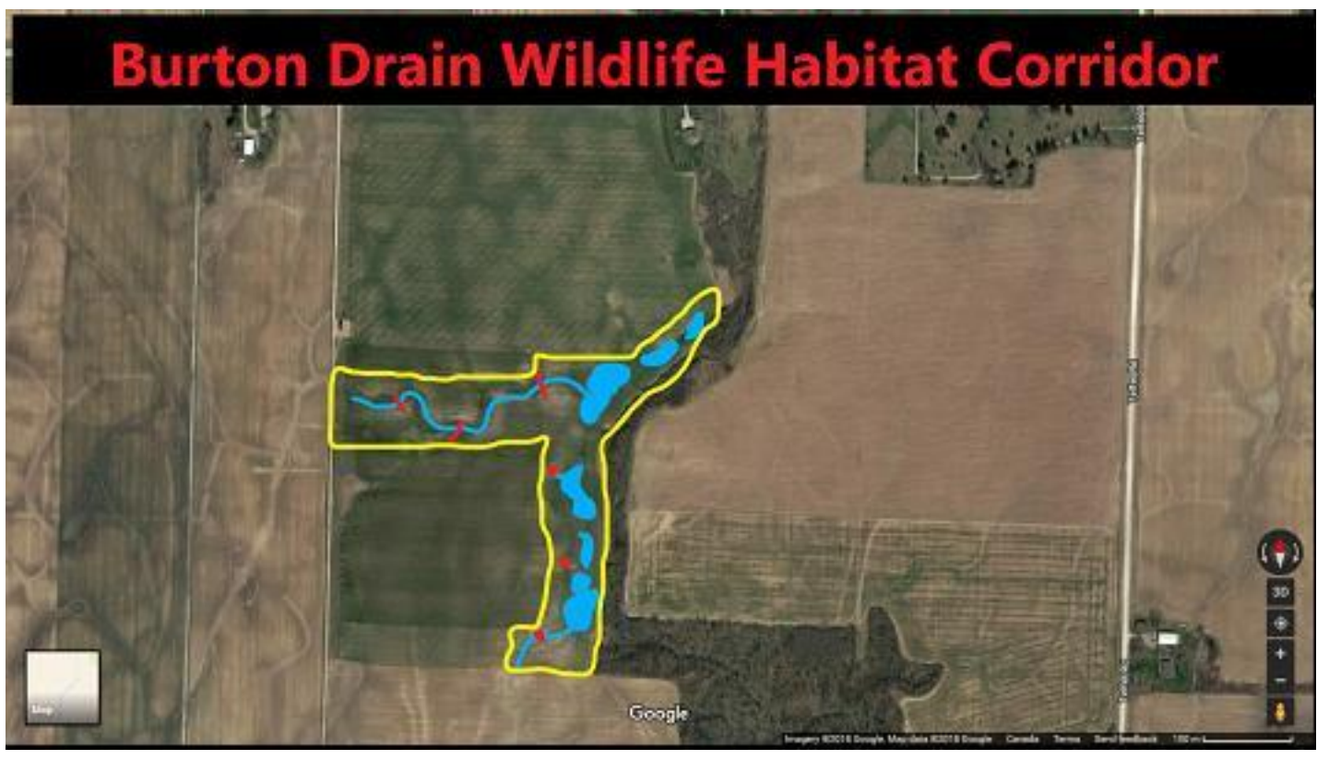
FOSCR Salutes Landowners Steve and Kerri Miller

There are many opportunities to minimize fragmentation using wetlands, trees, shrubs and native grasslands to connect our islands of habitat. In fact today, Oak Savannah and Tallgrass Prairie are two of the most endangered natural communities on the continent. Of the 542 species of plants officially considered rare in Ontario, approximately 20% of them are prairie related, surviving primarily in prairie fragments scattered throughout Southern Ontario.

Prairie is not simply a mix of grasses and flowers, but it is home to numerous species of wildlife. Most mammals are of the smaller variety and include red fox, coyote, American badger, eastern cottontail rabbit, meadow vole and the common shrew. Bird species such as bobolink, eastern meadowlark, savannah sparrow and bobwhite quail thrive in the open spaces created by tallgrass prairie for food and shelter. However, in most abundance are the diversity of invertebrates, like butterflies, grasshoppers, dragonflies, ants, beetles and spiders you will find hiding amongst the prairie.

The ***Burton Drain Wildlife Habitat Corridor Project*** is located along the Burton Drain in the County of Lambton within the Sydenham River watershed.



Project Location:
Lot - 10 W1/2, Concession – VI, St Clair Township, Lambton County; 2011 Moore Line, ON N0N 1M0

Project Description: The ***Miller Burton Drain Wildlife Habitat Corridor*** is privately owned by Steve and Kerri Miller. The Miller's in partnership with Ontario NativeScape initiated this project and implemented this project through the ALUS Lambton Program. Ontario NativeScape is the legal entity that facilitates the ALUS Lambton Program.

Through a collaborative multi partner stewardship effort including: ALUS Canada, a Weston Family Initiative, Ducks Unlimited Canada, **Friends of the St. Clair River**, the St. Clair Region Conservation Authority and Provincial and Federal Government Programs, the Millers were able to retire 12 acres of environmentally sensitive farmland and convert it into a combination of wetland and grassland habitats that will result in improved water quality and wildlife habitat in the area. Restoration enhancements included:

Before and During Wetland Construction

- **4.5 acre wetland creation** - 2 earthen berms with primary and secondary overflows;
  - Installation of 3 hickenbottoms along with erosion matting;
  - Creation of 4 sediment traps which will limit soil and nutrient movement into newly created wetlands
- **150 acres farm land filtered**
  - Augmenting tile to outlet into wetlands rather than outletting directly into the Burton Drain

- **6 acre tallgrass prairie planting**
  - All disturbed areas after construction were seeded with Ontario native tallgrass prairie as well as additional areas creating buffer/filter strips. Approximately 32 species of tallgrass prairie were seeded using a specialized truax drill.
- **1.5 acres of existing forest** that will be conserved
  - Existing hedge row is conserved and enhanced by expanding the area planting tallgrass prairie adjacent to it.

The ***Burton Drain Wildlife Corridor*** has the added bonus of creating excellent habitat for many of these species. This wildlife corridor is also fortunate as it is located along a riparian area - Burton Drain where habitat creation has the added benefit to cut down on NPS pollution within the Sydenham River watershed that drains into the St. Clair River.

The total project costs including in-kind contributions, annual maintenance fee (5 years) and implementation expenses = ***$106,000.00***

Another great project in the St. Clair River AOC!

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Lake Stopping Harmful Nutrients Dead In Their Tracks

The St. Clair Region Conservation Authority (SCRCA) recently completed a wetland project on one of the Conservation Authorities agriculture properties. The agriculture fields were washing out and large gullies were moving soil down to the floodplain and into Black Creek. To address the upland agriculture erosion, BF Environmental needed material so instead of trucking in that material, an excavated wetland was created.

This newly constructed wetland will collect overland flow and allow nutrients and sediments to deposit before releasing water to Black Creek. SCRCA greatly appreciates the contribution of **FOSCR** towards this project!

The photos were taken just after it was done.

http://www.friendsofstclair.ca/

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Friends of the St. Clair River (FOSCR-Canada) is an all-volunteer registered Canadian charitable organization. FOSCR works to promote conservation, beautification and other environmental restoration projects along the Canadian shore of the St. Clair River. FOSCR was created to assist in the development and implementation of the St. Clair River Remedial Action Plan (RAP).

BPAC is a community-based partnership including governments, industry, First Nations, academia, as well as environmental organizations and private citizens that work collectively in helping to improve the health of the St. Clair River. Our key goal is to implement the Canadian Remedial Action Plan (RAP) in order to restore the beneficial uses and remove the River from the list of Great Lakes Areas of Concern.

Ontario

This E-Newsletter is produced with support from the Ontario Ministry of the Environment